# CREATING AN INSTAGRAM FILTER TO ENHANCE VOCABULARY MASTERY IN EFL STUDENTS

### **THESIS**

In Partial Fulfillment of the Requirement for Master's

Degree in English Language Education



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DEPARTMENT OF ENGLISH LANGUAGE EDUCATION THE DIRECTORATE OF POSTGRADUATE PROGRAM UNIVERSITAS MUHAMMADIYAH MALANG 2024

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Malang, 28 March 2024

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#### **ABSTRACT**

The way of learning in Indonesia has changed significantly at this time. By utilizing the Instagram application which has a filter feature, it will help students facilitate vocabulary mastery. The title presented is "Creating an Instagram Filter to Enhance Vocabulary Mastery in EFL Students". This research aims to develop Instagram Filters to Enhance Vocabulary Mastery in EFL Students. The problem to be researched is, "How does the designed Instagram Filter facilitate students' vocabulary mastery in EFL classes?" In this research, the researcher adapted the Research and Development model from Borg and Gall. Interview instruments, student response questionnaires, and validation sheet questionnaires will be processed using mixed methods. The results of this research show that the media developed was Valid by education experts getting a score of 86% and product and design experts getting 96%. The results of the student response questionnaire received a score of 90.8%, which is in the very valid category. Apart from that, the researchers also conducted experiments by conducting pre-tests and post-tests which showed an increase in the average score from 56.29 to 76.57. This proves that using Instagram filters makes a significant difference in increasing students' vocabulary mastery.

#### I. INTRODUCTION

This chapter will contain several explanations which will explain many things following the researcher's objectives. The researcher will explain the Research Background, Research Problem, Research Objectives, Scope and Limitation, Research Significance, and Definition of the Key Terms

#### A. Research Background

The way of learning in Indonesia has changed significantly at this time. Almost everything relies on technology in the modern era, especially in teaching and learning. With developing technology, we can use it to facilitate the teaching and learning process. One of the technologies that we can rely on is Smartphones. Shazali et al. 2019 said that using a smartphone is an effective way to help the teaching and learning process in the classroom. Utilizing learning technology will be innovative, especially in learning English. By utilizing smartphones, students are expected to be able to study anywhere. Besides Pramono and Setiawan (2019) said combining learning with technology will make students more interested in learning. Using a smartphone, students can dig up information more accurately and quickly. Therefore, Zhang (2013) said that learning using familiar technology will interest students in the learning process. One of them is by utilizing applications that students often use. One such application is Instagram. Shazali et al. (2019) mentioned that Instagram is one of the media that can be used for learning. By relying on Instagram, we can provide learning media that is interesting and of course close to them because almost every student uses the application. Handayani (2016) emphasized that utilizing applications that students often use, especially Instagram, will increase students' English skills because there are features on Instagram that can be used as learning media. Instagram will support learning with experiences that students get in class and outside the classroom so that by utilizing this it will certainly make students more motivated and interested in understanding and carrying out learning. Chisega-Negrilă, (2015) and Gusti et al., (2023) argue that social media applications, especially Instagram, will directly help the student

learning process because Instagram can be accessed anywhere and opened by anyone without requiring certain restrictions.

The Instagram application is a social media application intended for communication. Instagram has the potential as one of the learning media, especially for learning English (Erarslan, 2019). The Instagram application has features that can be used as learning media. Features in the Instagram application, everyone can share their experiences, including their learning experiences. One of the unique features of Instagram is the animated filter that we can use to play games. In this case, we can use it as an alternative fun learning media. Hu et al. (2014) and Putra (2020) they were said that fun learning can be used as an alternative way to support learning, especially in learning English. In addition, Andreani and Ying (2019) said the use of games in learning can increase students' interest and motivation towards the learning process. The use of Instagram filters in learning will be very effective if used correctly by the teacher. When applying activities using the Instagram filter, students will record their activities, making it easier for the teacher to monitor student learning progress. The recording can be posted directly and shared with the teacher directly. In addition, these benefits can be used as teacher evaluation material to see weaknesses and what students do not understand (Ariantini et al., 2021). Facilitating students with learning media, namely Instagram Filters, will make it easier for students to understand learning. In addition, combining technology with the learning process will make it easier for teachers in the learning process. Another advantage is that every student can use this Instagram filter wherever and whenever which will help the student's English learning process.

In the previous study, Gusti et al. (2023) designed learning media Instagram filters to increase the significance of Mathematics skills in class. The researcher developed learning media based on Instagram filters for junior high school students and aimed to learn about relations and functions that were very difficult for students to understand. The results of this study show that media based on Instagram filters get good responses from students by getting an average score of 83.22 percent and very good interpretation on the validation and media feasibility tests. Furthermore, Karundeng, (2020) also develops alternative media for accounting learning using

Instagram filters. This is because learning accounting is considered difficult because it involves a lot of calculations, so there is fear, and students are not motivated to learn. The results of this study stated that learning combined using Instagram filters turned into an educational fun learning medium and able to motivate students in accounting courses with a score of 4.48 out of 5 "very high".

On the other hand, the researcher identified challenges in integrating this learning media into the English learning environment. By analyzing these potentials and constraints, this research will provide insight into how the best approach is in developing and implementing instructional media for learning English. Hasan and Khan (2020) revealed that there are still many learning media that do not consider content for students. Irrelevant Content: Not all learning media content may be relevant to students' needs or level of understanding. Content that is too easy or too difficult can reduce the effectiveness of learning. On the other hand, Chisega-Negrilă, (2015); and Mandasari and Aminatun, (2022) revealed that some uses of learning media do not take into account the Personal Feedback aspect. Lack of Personal Feedback, some learning media may not provide personal feedback to students, which can specifically hinder the development of their English skills. Apart from that Bery Mokalu et al., (2021); Khanzode and Sarode, (2020); Puspitarini and Hanif, (2019) revealed that the learning media in circulation is less capable of monitoring and evaluating. Monitoring student progress and measuring their understanding in an online learning environment can be more difficult than in a traditional classroom (Carpenter et al., 2020). Teachers may face difficulty in gauging the extent to which students understand the material.

In this study, the researcher will try to develop an Instagram filter that will be combined with Vocabulary learning. In the Instagram filter that will be developed, the researcher will create vocabulary learning with randomized vocabulary words to facilitate and enhance Vocabulary students learning. The researcher will also use the Research and Development method and the title of this paper is "Creating an Instagram Filter to Enhance Vocabulary Mastery in EFL Students".

#### B. Research Problem

Concerning the research background, as explained before, the problem to be researched is, "How does the designed Instagram Filter facilitate students' vocabulary mastery in EFL classes?"

#### C. Research Objective

Based on the research background as will be presented and stated above, the objective of this research is for the researcher "to design an Instagram Filter designed to Facilitate Students' Vocabulary Mastery in EFL classes."

#### D. Scope and Limitation

The scope of this research focuses on learning media about Vocabulary that the researcher will develop, namely filters from Instagram to increase students' vocabulary. In this study, the researcher limited the Software Engineering students of Assalaam Vocational School Bandung to 35 students.

The media used is the adaptation and utilization of features from the Instagram application, namely Instagram filters. Instagram filters provide interactive features such as polls, questions, or stories that can be used to create vocabulary-based quizzes, challenges, or activities.

#### E. Research Significance

In this research, the researcher will develop technology-based learning media, namely using smartphones aimed at English teachers who use the Instagram application and one of Instagram's features, namely Instagram filters. This research will help English teachers achieve learning goals by using the media developed, namely Instagram Filter. Apart from that, this research will also help teachers in classroom learning so that learning is more interesting where teachers can combine learning with technology. This will also increase learning objectives, especially in Vocabulary learning. It is also hoped that the media developed will help students understand vocabulary, which of course will be useful for students in facing everyday life. Apart from that, by combining learning with technology, learning will be more innovative and will make students motivated to learn English, especially learning Vocabulary.

#### F. Definition of Key Terms

To avoid misunderstanding, the definition of a key term will be explained below:

#### 1. Instagram

The Instagram application is an application for sharing information that can be used to view, share, and communicate. Instagram filters have the potential to become an interactive learning medium that has features such as photos, videos, and animated 3D filters.

#### 2. Filter

Instagram filters are a feature of the Instagram application which is a technology that utilizes 3D animation combined with real life. Instagram filters can also be used to upload photos and videos. One of the advantages of Instagram filters is that we can create and design filters.

#### 3. Vocabulary

Vocabulary is the knowledge of words and word meaning, is part of a particular language, and is used to construct sentences.

#### 4. Teaching

Teaching is one of the main components of educational planning, which is a key factor in the execution of educational plans or learning processes in the classroom.

#### II. REVIEW OF RELATED LITERATURE

The purpose of this chapter is to review some of the related theories by some experts. This chapter will focus on explaining Vocabulary, Teaching Vocabulary, Learning Media, and Instagram Filters.

#### A. Vocabulary

In learning a foreign language ALQAHTANI (2015) said that learning vocabulary is a very important part. Vocabulary learning can be said to be one of the pillars of language learning and is important for learners. In addition, Alharbi (2015), and Schwartz and Raphael (1985) Stated that Vocabulary is words that have a special meaning that can be understood in communication. By studying Vocabulary, one will understand more complex texts. Having good skills in

vocabulary helps students understand more complex texts, such as articles, books, or academic materials. By mastering the right vocabulary, they can read and understand texts better, identify the meaning of unfamiliar words, and associate them with the right context (Meyer and Schmitt, 2002; Permana, 2020; Richards, 1976; Schwartz and Raphael, 1985). Vocabulary is a basic thing that must be known for students aiming to improve various skills such as Listening, speaking, reading, and writing skills aiming to communicate effectively (Susanto, 2015). Based on the definition of experts, it can be concluded that Vocabulary refers to a collection of words that are owned or understood by someone in a particular language. In simple terms, a vocabulary is a group of words mastered by someone and can be used to understand, produce, and communicate language. A wide vocabulary allows learners to express their thoughts, ideas, and feelings more precisely and clearly. By understanding and using a variety of vocabulary, learners can communicate. Good vocabulary mastery is important for effective language comprehension and production. The wider and more varied a person's vocabulary, the easier it will be for them to understand complex texts, communicate well, and express thoughts and ideas appropriately in the language they are learning. Every foreign language learner, especially in English, can master a lot of Vocabulary including Verbs, Nouns, and so on. Andreani and Ying (2019); Hao et al. (2019); Meyer and Schmitt (2002); Richards, (1976) confirmed that vocabulary mastery skills have an impact on learners. The impact of mastering Vocabulary skills may have an impact on the lives of learners in acquiring a foreign language. Mastering Vocabulary also has an impact on mastering other skills such as Writing, Reading, Listening, and Speaking. Therefore, Vocabulary mastery is very important in supporting the learning process (Yang et al., 2020).

#### **B.** Teaching Vocabulary

Vocabulary learning in acquiring a foreign language is important for all students because if the learner does not master the vocabulary the learner will have difficulties in the learning process resulting in the learner being unable to get fluent, understand the information conveyed, and express their ideas. Teaching vocabulary refers to the process of introducing, introducing, and helping students learn new

vocabulary in the language being studied (Dakhi, 2019; Schmitt, 2019). It involves strategies and methods designed to help students broaden and enrich their knowledge of vocabulary. In addition, the teacher must provide a good learning experience that is suitable for students. Teachers are required to master teaching strategies to teach Vocabulary. The fact is that there are still many issues and problems in the field which indicate that teaching Vocabulary is still confusing in choosing the best practice for teaching vocabulary (Hunt and Beglar, 2007; McCarten, 2007; Susanto, 2015). This study emphasizes that researcher do not see teacher vocabulary teaching as a systematic, complex, written model. In addition, there are times when it is difficult to know where to start teaching in terms of learning vocabulary.

Vocabulary learning that is often taught by teachers is how the teacher introduces word for word to students. Whereas in teaching vocabulary the teacher not only introduces and gives some parts of words to students, but the teacher must also help students and see how students process the material provided. Sometimes teachers only provide teaching techniques that make students not interested in teaching (Bhakti and Marwanto, 2018; Karami, 2019; Rahman and Angraeni, 2020). Therefore, teachers must be prepared and smart in providing learning techniques that are comfortable and acceptable to students. ALQAHTANI (2015) and Permana (2020) said that providing techniques and teaching vocabulary correctly helps students understand the meaning and use of words accurately. By providing clear definitions, relevant examples, and usage in appropriate contexts, teachers can help students build a correct understanding of the vocabulary. On the other hand, Agustin and Ayu (2021) also emphasize that teachers who teach vocabulary correctly provide a strong foundation for students to develop independent learning. With a proper understanding of vocabulary, students can continue their independent learning by reading, watching, or listening to material in the language being studied and expanding their vocabulary.

Overall, vocabulary has a vital role in foreign language acquisition (Alshahrani, 2023; Rima Dewanti, 2021). A good vocabulary command facilitates comprehension, communication, writing, and other language skills in a foreign

language. It involves strategies and methods designed to help students broaden and enrich their knowledge of vocabulary. Many experts have suggested several techniques for teaching vocabulary as in the journal (ALQAHTANI, 2015; Kumar and Murthy, 2020), apply several Vocabulary teaching techniques put forward by Brewster, Ellis, and Girard (1992):

#### 1. Using Objects

This teaching utilizes objects in teaching vocabulary to provide students with concrete learning experiences that are directly related to the real world and can help students remember vocabulary.

#### 2. Drawing

This technique uses drawing the objects on the blackboard or flashcards, using magazine pictures, photographs, and wall charts. Using drawings and pictures helps strengthen visual recognition and enrich students' mental representations of vocabulary. This facilitates better understanding, associates words with concrete objects or concepts, and retains vocabulary in students' memory.

#### 3. Contrast

In teaching this learner must contrast the opposite of the word being explained, such as "high" contrasted with "low". Using contrasting techniques in teaching vocabulary involves admiring and distinguishing between words that are similar or have opposite meanings. This helps students understand nuances and subtle differences between the words.

#### 4. Enumeration

Using enumeration techniques in teaching vocabulary involves mastering or ordering words in a certain context. This helps students strengthen vocabulary recall, improve sequencing skills, and engage them actively in learning. For example, teachers may list a number or an alphabet of furniture, e.g., a table, a chair, a stool, etc.

#### 5. Guessing from Context

Vocabulary involves helping students identify the meaning of new words based on the context of sentences or texts they are reading or hearing. This helps them develop comprehension skills and enrich their vocabulary.

#### 6. Translation

Using the translation technique in teaching vocabulary involves helping students understand the meaning of new words in their native language by translating those words into the target language being studied. This helps students make connections between vocabulary in their native language and vocabulary in the target language, thereby facilitating understanding and enriching their vocabulary.

In the coming year, Bakhsh (2016); HASHEMİ (2021); Karami (2019); and Lelawati et al. (2018) suggest that there are other techniques in teaching Vocabulary that have proven to be effective, namely learning through games. Using games in teaching vocabulary is a fun and interactive way to engage students in vocabulary learning. Using games to teach vocabulary helps create a fun learning atmosphere and increases student motivation (Hariyono, 2020; Rahman and Angraeni, 2020). In addition, games can also reinforce understanding and remembering vocabulary interactively and interestingly. It is important to select and arrange vocabulary and technique materials that are appropriate to students' ability levels and relevant to their learning objectives. In addition, providing opportunities for repetition and continued use is also important in helping students solidify and secure new vocabulary into their language repertoire.

Concluding from some of the explanations above, we can use several vocabulary pursuit techniques to carry out Vocabulary teaching to overcome issues and problems in teaching. Based on some of the theories above, it will be used as a basis for classroom teaching practice and by the objectives of the Research Question.

#### C. Learning Media

Learning media refers to various tools, resources, and materials used in educational contexts to facilitate and enhance the learning process (Muhsyanur et al., 2021). It includes a variety of media formats and technologies designed to deliver educational content to learners engagingly and effectively. Learning media can be both traditional and digital, and function as a vehicle to convey information, encourage interaction, and support different learning styles (Monita and Ikhsan,

2020). Learning media encompass a diverse array of tools and resources employed in educational settings to facilitate effective learning experiences (Lusiana and Maryanti, 2020). Saputra et al. (2021) stated that ranging from traditional materials like textbooks and printed resources to digital platforms, videos, interactive software, and virtual reality applications, learning media engage learners through various sensory modalities. These media offer visual, auditory, and interactive elements that cater to different learning styles, enhancing comprehension and retention. By providing authentic language use, cultural exposure, and opportunities for interactive engagement, learning media contribute to language acquisition and skill development (Monita and Ikhsan, 2020; Saputra et al., 2021). They foster motivation, enabling learners to engage with content at their own pace, while also promoting continuous learning beyond formal classroom environments through online resources and interactive platforms. This is in line with Puspitarini and Hanif (2019) argument that Integrating learning media into teaching enhances student engagement and comprehension by utilizing dynamic visuals, interactive simulations, and authentic contexts. These media accommodate diverse learning styles, offer immediate feedback, and encourage active participation, fostering critical thinking and skill development (Susanty et al., 2021). With the flexibility to personalize learning, access resources globally, and practice language skills in realworld scenarios, students are motivated to become lifelong learners. At the same time, teachers benefit from efficient and effective educational tools, creating a holistic and impactful learning environment. On the other hand, Silalahi et al. (2022) said that It's important to note that while learning media offers numerous advantages, they should be used strategically as part of a comprehensive language learning program. Combining different types of media with classroom instruction and real-life communication experiences can create a well-rounded approach to teaching and learning English.

#### **D.** Instagram Filters

In the modern era, many communication applications aim to support interaction and information sharing. Instagram is one of the most widely used communication-based applications by the public. Instagram is popular because it has many features and is very easy to use without having to have special skills. Instagram users can create personal or business profiles and post their content, including photos, videos, and short stories that are up to 24 hours long. They can also edit and beautify their content with a variety of creative filters, stickers, text, and effects. Instagram has become a very popular platform among users from all walks of life, including individuals, celebrities, businesses, and organizations. It has become popular for sharing moments, inspiration, and great visual content. On the other hand, this is used by teachers to be used as a language-learning tool or media, one of which is Vocabulary learning (Handayani, 2016). Instagram filters can be used as an effective medium for learning vocabulary. Instagram as a popular social media platform has features that can be used to broaden students' understanding of vocabulary.

Nowadays, Instagram filters as a vocabulary learning media have a significant role in providing a creative, interactive, and fun learning environment. Gómez-Ortiz et al., (2023); Pujiati et al., (2019) stated that Instagram filters allow sharing visual content such as pictures and videos. In the context of learning vocabulary, users can post pictures related to words, definitions, or example sentences that help students understand and remember new vocabulary. Visual content helps build associations between words and pictures, reinforces student understanding, and facilitates retention (Ahmadi & Tabatabaei, 2021; Alotaibi, 2023; Mirković, 2022; Sandy & Fath, 2019). Instagram filters provide interactive features such as polls, questions, or stories that can be used to create vocabularybased quizzes, challenges, or activities. Teachers or instructors can create interactive content that engages students to participate, such as guessing the definitions of words, making sentences with certain words, or sharing experiences related to these vocabulary words. Abdulaziz Al Fadda (2020); M. S. Rahman (2021); and Senolinggi et al., (2020) also said that Instagram is a good place to increase collaboration between students. This is also in line with what was said by Habibah et al., (2021); Kaviani, (2022); Sipayung, (2021) that Instagram filters allow collaboration and student participation in the vocabulary learning process. They can share photos or videos they created themselves related to the new

vocabulary, or comment on content shared by their teacher or classmates. This collaboration can enrich learning by actively involving students and enabling them to learn from one another. In addition, Hu et al., (2014); Qisti (2020); Shazali et al., (2019) asserted through Instagram filters, students can see new vocabulary used in real contexts. They can find examples of the use of words in photo captions, other users' stories, or comments. This helps students understand how these words are used in everyday life, increasing their understanding of the connotations, deeper meanings, and nuances of how words are used. In addition, Gómez-Ortiz et al., (2023); Karundeng, (2020); Kaviani, (2022); Noor Auly et al., (2021); Rohaizat et al., (2021); Senolinggi et al., (2020); Veygid et al., (2020) agreed that Instagram filters could be used as an additional learning resource by following accounts that provide educational content or special accounts that focus on learning vocabulary. Students can follow these accounts to get updated vocabulary content, study tips, definitions of words, and additional useful resources.

In this research, the researcher adapted learning media, namely the Instagram filter from (Gusti et al., 2023), where the researcher changed several aspects of the previous learning media to perfect and create a new design for the learning media that would be developed by the researcher. The researcher adapted previous learning media because they still saw many shortcomings and no previous learning media had been used to teach vocabulary material to software students. Apart from that, adapting previous learning media and developing and perfecting the media will meet the different learning needs of students because each student has a different learning style. On the other hand, developing different learning media can help students understand concepts better. When adapting and developing learning media, the researcher also considers several things such as learning objectives that suit student needs. Therefore, by adapting and developing other learning media, the researcher can make learning more effective, interesting, and of course to students' needs.

#### III. RESEARCH METHOD

The chapter contains explanations of several points such as research design, research and info collecting, research object, and subject, planning, developing a

preliminary form of product, preliminary field testing, main product revision, main field testing, operational product revision, operational field testing, final product revision, dissemination and implementation, data collection techniques, data analysis, and Instagram Filter experiment.

#### A. Research Design

The use of appropriate research methods is essential in conducting research. Choosing the right research method means choosing the approach that best fits the research objectives and questions (Prasetyo, 2014). The right method will enable the researcher to collect relevant data and produce informative and significant results. By choosing the right research method, the researcher can improve the quality of the research, ensure the validity and reliability of the results, and save valuable time and resources. This will help strengthen the knowledge base and understanding of the studied field. Many methods are used in research, one of which is Research and Development. In this research, the researcher also carried out media experiments that have been developed using a Pre-Experimental design.

In this research, the researcher adapted the learning media, namely the Instagram filter (Gusti, et al., 2023) where the researcher still saw a few shortcomings and saw the potential for the learning media to be effective if it was further refined. Apart from that, the researcher also saw that previous media could not be used by students majoring in software engineering because of differences in design and material. Therefore, researcher have adapted and developed Instagram filter learning media that suits students' needs.

Research and Development research methods refer to approaches used to generate new knowledge and develop or improve products, processes, or technology (Prasetyo, 2014). R&D is systematic steps to apply scientific research to achieve innovation. R&D research methods are often used in the context of developing new products or technologies, both in the industrial and academic sectors. The main objective of the R&D method is to increase knowledge and skills in developing innovative, effective, and efficient products or technologies (Farah, 2020).

In this study, the researcher used the Research and Development design to create Vocabulary learning media for the Instagram application, where he utilized one of the features in the Instagram application, namely the 3D animation filter. Next, in this study, he also focused on designing Instagram filters to become Vocabulary learning media such as filling in missing words and rearranging letters that had been scrambled. This learning combined with technology applications for Vocabulary learning. The purpose of making learning media that uses Instagram Filters is to make it easier for students to study Vocabulary so that learning becomes interesting, interactive, and relevant to modern learning needs. In this research, the researcher implemented and referred to the research method put forward by the Borg and Gall model in 1983 (Syafiudin et al., 2016). The researcher used ten steps which are shown in the table below. The researcher added and changed step 3 to Adapting the existing product. This was because the researcher adapted from a previously existing product and developed and changed the total product into a new product but still used the Instagram filter application.

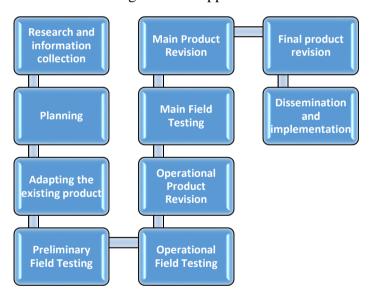


Figure 1 The steps to be used in the Borg and Gall (1983) research method.

#### B. Research and information collection

Vocabulary learning becomes more interesting by using a combination of technology, especially through Instagram filters. Students can explore new vocabulary creatively and interactively. By using Instagram filters, they can visualize words in real context through engaging images and videos. This allows them to build strong associations between words and their meanings, increasing their comprehension and retention. In addition, with interactive features such as polls or questions in the Instagram filter, students can actively participate in learning activities, and guess the words. The researcher focused on designing Instagram filters to become Vocabulary learning media such as filling in missing words and rearranging letters that have been scrambled. Through a combination of effective vocabulary learning and the use of Instagram filter technology, students can develop their language skills in a fun and motivating way.

Every student must master vocabulary to make it easier for them to learn a foreign language. In the experience of the researcher and facts in the field, many teachers still teach using ordinary media and only use books as the main learning media. This triggers students not to be interested in the lesson so the learning experience is limited. There are still many teachers who are hesitant to combine learning with technology even though at present it has shifted where all of them use technology to make it easier to find information. The researcher tried to develop learning media using Instagram filter games based on technology to help teachers teach fun and not monotonous lessons, especially teaching Vocabulary. Included in this step are literature studies related to the problems studied, and preparation for formulating a research framework.

Apart from looking for material, the researcher also looks for information on media designs that are different from previous learning media designs. The researcher still saw some shortcomings and added several features to the Instagram filter that be developed, such as adding different media designs, improving performance (bug errors on old media), strengthening content that is easy to understand, and adjusting student needs which will be tailored to the needs target students specifically.

#### C. Research Object and Subject

The subjects in this study were 10th-grade students of Software Engineering, SMK Assalaam Bandung as many as 35 students. The researcher chose them because these students are who are very familiar with the Instagram

filter and because all students already have the Instagram application and use the application every day to find and share information. In addition, these students were also new to majoring in software engineering where there are still many students who are not familiar with some Software vocabulary on certain materials.

Instagram offers features that can be used as interesting Vocabulary learning media. Through Instagram features that as Instagram Filter, students can visualize new vocabulary. The researcher made a new design for Vocabulary learning with filters and 3D animation from the Instagram application, by randomizing a letter students rearranged and filled in missing words or rearranged words that had been scrambled.

#### D. Planning

In this step, the researcher formulated skills and expertise related to the problem, determined the goals to be achieved at each stage, and, if possible/necessary, carried out a limited feasibility study. The researcher designed learning media using Instagram Filter which was used to facilitate vocabulary learning. The learning media developed by the researcher was based on students' abilities in class and it is hoped that Instagram filters can facilitate students' vocabulary learning. On the other hand, the researcher will introduce innovative learning that combines learning with technology, namely Instagram filters in facilitating students' Vocabulary learning. In this research, the researcher created and developed learning media, namely Instagram filters, intending to facilitate and find out how effective the learning media that has been developed is. The selection of material in the media to be developed was also considered by selecting relevant topics according to student needs by reviewing the material and directly asking the relevant teacher. Additionally, the researcher also created Expert Validation sheets, questionnaires, and interviews.

#### 1. Product Specification

The researcher made a new design for Vocabulary learning with filters and 3D animation from the Instagram application, by randomizing a Letter students rearranged and filled in missing words or rearranged words that had been scrambled. The researcher made this filter assisted by a computer programmer and

used an Augmented reality system (Spark AR). In this Instagram Filter, students rearranged letters that the Instagram filter system has randomized. There were several steps in playing this Instagram Filter. The first step was the teacher provided material about Vocabulary. Before the students play this Instagram filter, the teacher explained how to play and demonstrated the Instagram filter. The students asked to open the application that had been set. After that, they were asked to practice according to instructions. In this Instagram filter, the students would arrange random letters, students gave correct answers and remembered the word listed. Apart from that, there was no level in this Instagram filter.

#### E. Adapting the existing product

In this step, the researcher developed products based on the shortcomings of previous products which are still deemed inadequate for software engineering students. The researcher changed the design of the Instagram filter because the previous design was too difficult for software engineering students to understand. Therefore, the researcher changed the instruction of the learning media so that each instruction in the learning media was easy to understand and suited students' needs. Adapted media can be tailored to the needs of specific target users. Additionally, the researcher also changed the content specifically only for software engineering students. Adapted media can strengthen its content by adding new information, examples, or illustrations that are more interesting and easy to understand. The researcher also added animation and interaction to the learning media that will be developed. In this research, the researcher also carried out regular testing and evaluation to ensure the quality and effectiveness of the media and to maintain learning media remains relevant to technological developments and user needs.

The next step in developing this product is how to develop an initial form of educational product. In this step, the researcher developed the initial form of the product to be produced. Included in this step was the preparation of supporting components, preparing guidelines and manuals, and evaluating the feasibility of supporting tools. In making the Instagram filter, the researcher created a random letters game concept, which students arranged according to the correct word. Then,

the researcher made a strategy to teach how to build correct words of Vocabulary through the Instagram filter. The making of this filter is assisted by a programmer using a 3D Augmented Reality system (SparkAr).

#### F. Preliminary Field Testing

The purpose of Preliminary Field Testing was to determine how the researcher tried out the newly designed product. In this step, the researcher conducted initial field trials on a limited scale. By involved as many as 2-3 subjects. At this step data collection and analysis could be done utilizing interviews, observation, or questionnaires. The trial was conducted on students in 10th grade in Software engineering, at SMK Assalaam Bandung. This trial also included a feasibility and media effectiveness test. Two experts helped validate this learning media. The first expert focused on validating the use of technology in applications and Design products. This expert worked at Junior High School 3 Pare Kediri as a Graphic Designer. The second expert from the English Language Education Department, at the University of Muhammadiyah Malang, focused on learning content.

#### **G. Main Product Revision**

The researcher made improvements to the initial product produced based on the results of the initial trial. This improvement was very likely to be carried out more than once, according to the results shown in the limited trial, so that the main product (model) draft was obtained and was ready for wider trials. For products that had been tested and obtained field data, the researcher assembled, analyzed, and calculated the data to see the shortcomings of the media that had been developed. Therefore, the researcher would perfect learning media according to needs based on certain aspects.

#### H. Main Field Testing

In this step, the researcher conducted a trial of the revised product and was given input from experts and the results of observations involving all students.

#### I. Operational Product Revision

In this step, the researcher made improvements/perfection to the wider trial results so that the product being developed was already an operational model design that was ready to be validated.

#### J. Operational Field Testing

At this step, the researcher carried out a validation test step on the operational model that had been generated.

#### K. Final product revision

The researcher made final improvements to the developed model to produce the final product.

#### L. Dissemination and implementation

The last and no less important step was Dissemination and implementation. After the product had been tested, it was ready to be used and tested on the students as a learning media. Next, disseminating the product/model developed and implementing it in the field.

#### M. Data Collection Technique

This section will explain and discuss how the researcher used data collection techniques and instruments. Prasetyo (2014) Data collection adjustments must be made so that the research is more organized and has clear objectives according to research needs. Interview instruments, student response questionnaires, and validation sheet questionnaires will be processed using mixed method which will be more suitable and easier for the researcher in this research. Interview questions will be used to strengthen research data by using open questions for students. Furthermore, field trial data is data taken from students when and after using the learning media developed. To strengthen the validation of learning media, the researcher designed a validation sheet questionnaire for two experts to get input and suggestions that would make learning media perfect. Comments, suggestions, and revisions that will be obtained from experts will help the researcher identify deficiencies in the learning media being developed. Student questionnaire

responses are given validity based on student responses from the Instagram filter learning media. Validity based on student responses refers to the extent to which learning media or research instruments are acceptable and liked by students.

**Table 1: Instrument of Validation Sheet for Education Expert** 

No.	Aspects	Comments	Point for Improvement	Overall Score (1-5)
1	Content/Topic of			
	material			
2	Clarity and Accuracy			
3	Level of Difficulty			
4	Sense of Fun			
	Learning			
5	Hands-on/ User			
	Friendly			
6	concept			

Adapted from Farah (2020); Jailani and Nurbatra (2019); Sabrinatami and Rinawati (2018)

Table 2: Instrument of Validation Sheet for Product and Design (Media) Expert

No.	Aspects	Comments	Point for Improvement	Overall Score (1-5)
1	Design of Media			
2	Quality of pictures, animations, illustrations, sound, etc.			
3	Colour/Background			
4	Attractiveness			
5	Concept			
6	Hands-on/ User Friendly			

Adapted from Farah (2020); Jailani and Nurbatra (2019); Sabrinatami and Rinawati (2018)

#### 1. Procedures

Moreover, the data of this study were collected through several steps that are explained below:

- 1. Drawing up a concept for the "Instagram filter"
- 2. Composing the " *Instagram filter* ", which contains random Letters to be arranged
- 3. Making a questionnaire validation sheet for experts

- 4. Arranging an interview guide and Questionnaires for student responses
- 5. Interviewing with open-ended questions
- 6. "Instagram filter" trial to education and media experts
- 7. Major product revision of " *Instagram filter* " after gathering suggestions and feedback from experts
- 8. Giving " *Instagram filter* " to the participant, and analyzing the data collected from the observations
- 9. Transcribing the student's results after finishing working on the "Instagram filter"

#### N. Data Analysis

In this step, the researcher will analyze the data that has been obtained based on the results of observations and trials of the learning media that has been developed. All procedures will be explained below;

- 1. Calculating the data results that have been obtained based on the results of the educational expert validation sheet related to Vocabulary material
- 2. Displaying data obtained from the results of the Product and design expert validation sheet
- 3. Checking the expert validation score with the formula below
- 4. Identifying and compiling data results that have been obtained after using Instagram Filter
- Arranging data from interviews with students and questionnaire data from student responses related to the learning media developed, namely Instagram Filter
- 6. Interpreting the result of the Instagram filter
- 7. Combining the data that has been obtained, namely the results of the expert validity sheet, interview transcripts, student response questionnaires
- 8. Concluding the data based on the result of the data that had been analyzed

$$Nilai = \frac{The \; number \; of \; validation \; scores \; obtained}{The \; maximum \; number \; of \; validation \; scores} \; x \; 100\%$$

(Adapted from Jailani and Nurbatra, 2019)

Table 3: Validity Criteria and Validity Level of Product

No.	Validity Criteria	Validity Level
1	85.01 % - 100.00 %	Very Valid, or it can be used without revision
2	70.01 % - 85.00 %	Valid, or it can be used but needs minor revision
3	50.01 % - 70.00 %	Less Valid, it is recommended not to be used because of major revisions
4	01.00 % - 50.00 %	<i>Invalid</i> , or it may not be used

(Adapted From Jailani and Nurbatra, 2019)

#### O. Instagram Filter Experiment

Apart from developing Instagram filters, the researcher carried out experiments on the Instagram filters that have been developed. The Instagram Filter experiment that has been developed was carried out to test the effectiveness and effectiveness of the Instagram Filter in achieving specific learning objectives. In this case, the researcher aims to measure the impact of Instagram Filters on learning. Experiments can help the researcher determine whether the media being developed can improve student learning outcomes or not (Farooq et al., 2016). Additionally, the researcher measures various aspects of learning, such as understanding vocabulary. Last but not least, the researcher conducted experiments aimed at obtaining empirical evidence to support the use of Instagram filters. This experiment can produce empirical evidence that can be used to support the use of Instagram filters in learning. This evidence can help convince stakeholders, such as educators, administrators, and parents, of the value and benefits of Instagram Filters in education (Buschle et al., 2022; Gani et al., 2020; Marsden & Torgerson, 2012).

In this study, the researcher used a pre-experimental design with 1 class containing 35 people. The researcher conducted experiments without a comparison group. In this design, initial pre-test measurements were carried out on students. After being given treatment using Instagram Filter three times, students will be measured again in the post-test using the same measuring questions. The steps were taken by the researcher in carrying out a pre-experimental design with 1 class

containing 35 people and using Paired Samples T-Test analysis. The steps taken by the researcher were as follows;

- 1. **Creating a Questionnaire:** the researcher contained a pre-test and post-test questionnaire with the same questions. The researcher created 10 questions related to software engineering Vocabulary material. The researcher ensured the questions were relevant to the material being taught and the Vocabulary learning objectives required by software engineering students.
- 2. Conducting Treatment: the researcher distributed pre-test questionnaires to 35 students in class. Carried out Treatment on learning using Instagram filters to students' Vocabulary learning three times. The first treatment was carried out by students being introduced to information about Instagram filters and descriptive text material to adapt. In the second treatment, students are given material, an Instagram filter, and a glossary about software vocabulary. In the third treatment, students are given material consolidation by writing descriptive text using the software vocabulary on Instagram Filter. After the treatment had been carried out three times, the researcher distributed post-test questions.
- 3. **Entering Data:** the researcher inputs pre-test and post-test data into one data file in SPSS. The researcher ensured that the data was neatly structured and the columns were named. The researcher carried out a normality test to ensure that the data was normally distributed. The test that the researcher used was Shapiro-Wilk. The researcher used the Paired Samples T-Test to compare the average pre-test and post-test of software engineering students. This test shows whether there was a significant difference between the pre-test and post-test results. The researcher performed descriptive analysis to analyze the pre-test and post-test.

Data analysis techniques include the following;

#### a. Analysis Prerequisite Test

Used to determine whether the analyzed data is normal or not. By using Shapiro-Wilk in SPSS with the following test criteria.

• Sig value. or significance or probability value < 0.05 the distribution is not normal.

• Sig value. or significance or probability value > 0.05 the distribution is normal.

#### b. Hypothesis Testing

The paired sample t-test was used to determine the effectiveness of the Instagram Filter in increasing students' software vocabulary. The hypothesis to be tested is as follows;

Ha: The use of Instagram filters makes a significant difference in increasing students' vocabulary

Ho: The use of Instagram filters does not make a significant difference in increasing students' vocabulary

The decision is as follows.

- If the Sig value. (2-tailed) < 0.05, then H0 is rejected.
- If the Sig value. (2-tailed) > 0.05, then H0 is accepted.
- 4. **Interpretation of Results:** The researcher interpreted the results of data analysis carefully and related them to the learning objectives of software engineering students. In this step, the researcher made conclusions about the effectiveness of the intervention based on the results of the analysis of the data that has been processed.

In general, the experiments on the Instagram Filter that have been developed aimed to find out how the media can be used to improve Vocabulary learning for Software Engineering students. This experiment can help the researcher find out whether the Instagram Filter that has been developed is effective and efficient, as well as provided valuable information about how the media can be used to achieve specific learning goals.

#### IV. FINDINGS AND DISCUSSION

This chapter presents the results of the research and a discussion of the research. Research findings are based on the results of data analysis. To further present the answers to the research problem formulation that the researcher has made, the research problem formulation: "How does the designed Instagram Filter facilitate students' vocabulary learning in EFL classes?" Then, it presents the discussion based on the related theories.

#### A. Research Findings

The researcher presents the results of research conducted to answer the research questions that have been formulated. The contents of this chapter present what the researcher has done and the data has been processed and analyzed based on predetermined provisions. This research produced the following findings; Instagram filter, Filter Validity, and The Students' Response toward Instagram Filter.

#### 1. Instagram Filter

In this section, the researcher explained and presented the data that had been obtained as well as the data that had been found during the research process. Learning media product development had objectives that must follow the problems previously studied. The goal was to identify ideas that meet student needs, have a competitive advantage, and are technically feasible for use in the classroom. It was also that the Prototype was an initial mockup or simplified version of the product that allows testing and feedback. They can be physical models, digital wireframes, or interactive simulations. Prototypes are used to collect feedback from potential users. This feedback was used to improve product design and functionality. The cycle of prototyping and testing is repeated until the product is deemed satisfactory. The concept developed in this research is an Instagram filter that was used to facilitate vocabulary learning for grade 10 software students at SMK Assalam Bandung. The concept of processing vocabulary material where students guessed the correct word and rearranged the letters randomly. Next, the researcher was assisted by an animation programmer using the Augmented Reality 3D animation

system. In the *Instagram Filter*, there are several components such as *animated images*, sounds, and a display of random words.

#### a. Animated Images

Animated images on Instagram filters are one of the components used in Instagram filters. Animated images can be static images that move or images that change dynamically. Visual effects are effects created using animation. Visual effects can be used to make a film or video look more realistic or interesting.

Figure 2 Outlook of Instagram Filter



The first phase contains the tagline and instructions that students must carry out next. One of the technological components used is the Face tracker component which is used to track the position of the user's face. A face tracker is used to create effects that follow the user's facial movements. Face mesh is a component used to create a 3D model of the user's face. Face mesh is used to create more complex effects, such as facial transformation effects or AR effects.

#### b. Sounds

Sound in the Instagram filter was a component used to add sound to the filter. Sound in the form of music and sound effects. One of the sounds used in the Instagram filter is to show the time so that users know more about how much time is left based on the animated time image. Adding Sound effects can be used to add certain effects to a video to make the video look more dramatic. On the other hand, adding a sound atmosphere will add a certain atmosphere to the video. For example, musical sounds can be used to add a cheerful atmosphere.

#### c. Display of Random Words

The random word display can be used to randomize the words that will be given to students. For example, filters that allow users to enter and compose their

own words can be used to create more personal and unique videos. In developing the Instagram Filter, the researcher created random words that matched the material. The researcher provide questions in random words to make it easier for students to identify answers. The random word display color on the Instagram filter is chosen according to the contrast of the other colors to make it easier for students to see the words clearly. Random words will be shown for 10 seconds and students must arrange and name words or vocabulary that match the question. After the time runs out the correct answer will appear in 3 seconds so that students can identify the correct answer and correct their own answers that they have already answered.

**Figure 3 Rearranging Jumbled Letters** 



In this phase, students started the game by arranging random letters which had to be completed within 10 seconds. In this phase, students were helped with questions that would give them a little insight into the words that had to be answered.

Figure 4 Results by showing the correct word



In this final phase, after the time runs out the filler will display the correct answer on the screen. Once finished, students can play and try the Instagram filter again.

## 2. Filter Validity

**Total** 

The first validation is about the educational content of the filter conducted by experts from the English education department with the following results. The results of validation on educational contents were based on the assessments of six aspects. Based on the results of the validation sheet obtained by the researcher, it contains several points that will be explained. (1) Content/Topic of material, this aspect got a good score, but there were several notes received in the media that had been validated by experts, such as giving a starting question at the start of the game and giving an introduction to what students would do next. (2) Clarity and Accuracy, this aspect gets a score of 5 which means it is in the Excellent category. (3) Level of Difficulty, in this aspect, get a good score and get several comments and notes from the validator, such as giving a score based on the level of difficulty of each word to be arranged and can start from short syllables to long syllables. (4) Sense of Fun Learning, (5) Concept, and (6) Hands-on/User Friendly, these three aspects received Excellent marks and there were no comments or suggestions from the researcher.

Table 4: Interpretation of Educational Content validation scores based on aspects

No.	Aspects	$\sum$ Score	Criteria
. Cont	ent / Topic of	3	Good
Mate	erial		
l. Clar	ity and Accuracy	5	Excellent
2. Leve	l of Difficulty	3	Good
3. Sens	e of Fun	5	Excellent
Lear	ning		
4. Cond	ept	5	Excellent
5. Han	ds-on/ User	5	Excellent
Frie	ndly		

Table 5: The Result of Educational Content Validation on Instagram Filter

26

∑ Score	Percentage (%)	Validity
26	86%	Very Valid

Based on the overall validation score obtained, it reached 86%, and the product validity level was declared valid because it complies with the validity score criteria. However, there are still minor revisions that need to be corrected according to comments and suggestions from validators. On the other hand, validation results by material and content experts show that the media meets the criteria for the validity of learning materials, namely: Accuracy of the material, suitability of the material to the curriculum, suitability of the material to the learning objectives, and suitability of the material to the characteristics of the students. Based on the validation results, it can be concluded that the Instagram filter learning media has high validity. This means that this media can be used to facilitate vocabulary learning effectively.

Based on the results of interviews with content education expert using narrative analysis. The expert provided criticism and suggestions for a word formation game. The criticism is that the game doesn't yet have a "warning/introduction" to organize and vocabulary groups to use. The suggestion is to add these instructions so that players are better prepared for the Instagram Filter. Therefore, the researcher considered adding clear and informative initial instructions. These instructions should explain to players the words they have to construct and the vocabulary groups used in the Instagram filter. Without these instructions, players may feel confused and unprepared to face the challenges presented. With clear instructions, players will have a better understanding of the Instagram filter and be better prepared to form words optimally. The researcher Added clear instructions about the number of words and vocabulary groups to letter building can improve the learning experience for users. This instruction will make players feel more prepared and confident in facing the challenges of the Instagram filter. Additionally, the expert stated that this innovative learning media was considered to have good potential. However, to maximize its potential, the researcher needs to first pay attention to points that have not been mentioned in detail in this text. After these points have been addressed, the researcher can assess the level of difficulty of this learning media. The assessment of the level of difficulty can be done by considering various factors such as word length,

vocabulary groups used, and other factors that may be relevant. Even though there are points that need to be improved, overall this learning media is considered very good, impressive, innovative, and out of the box. This shows that this learning media has great potential to improve the teaching and learning process. Even though there are points that need improvement, overall this learning media is considered very good and has the potential to bring a breath of fresh air to the world of education.

Based on comments from material education expert, the researcher changed and revised several Instagram filter designs according to education expert directions. The researcher changed the design of the Instagram filter at the beginning when the media was running, where the researcher added some vocabulary to give students preparation for answering the next question. Furthermore, the researcher also added short-syllable vocabulary to long syllables so that students would find it easier to answer questions from easy to difficult vocabulary. The researcher also changed the design so that long syllables could be seen easily by students.

The next validation is about the product and design of the Instagram filter. The expert Validator is a teacher Graphic Designer from Junior High School 3 Pare with the following results.

Table 6: Interpretation of Product and Design validation scores based on aspects

No. Aspects	∑ Score	Criteria
1. Design of Media	4	Good
2. Quality of pictures, animatic	5	Excellent
illustrations, sound, etc.		
. Color/Background	5	Good
. Attractiveness	5	Excellent
. Concept	5	Excellent
6. Hands-on/ User Friendly	5	Excellent

Total 29

Table 7: The Result of	Product and Design Validati	ion on Instagram Filter
∑ Score	Percentage (%)	Validity
29	96%	Very Valid

Based on the validation results of Instagram filters that had been validated by Experts, six aspects had been determined. The first aspect, namely the Design of Media received comments and points for improvement such as this learning media has an attractive and informative design, but the design was not optimal because users can only answer one vocabulary word in one video. The second aspect, namely the quality of pictures, animations, illustrations, sound, etc. The quality of the pictures, animations, illustrations, and sounds in the learning media is very good and clear. In the third aspect, the vibrant and contrasting colors used in the design effectively capture the user's attention. For the fourth aspect, Instagram Filter makes users motivated and not bored. Next fifth aspect of the Concept of the Instagram filter is easy to use. The last aspect is the Hands-on/User-friendly Instagram filter is simple. The result of this media was 96% for the overall score. This means that the level of product validity and design is valid or can be used without revisions. The results of validation by product and design expert show that the media meets the criteria for the validity of learning media, namely: Suitability to learning objectives, Conformity to learning material, Conformity to student characteristics, Compatibility with other learning media, and ease of use.

Based on the results of interviews with product and design experts using narrative analysis. The researcher analyzed and emphasized the design of this learning media has many strengths, such as attractive design, helpful features, and effectiveness in increasing user motivation and understanding. However, this media design also has one main weakness, namely its design is limited and less effective because users can only answer one vocabulary word in one video. Overall, this learning media design has great potential to improve the teaching and learning process. This learning media can be a very effective tool for improving users' understanding and mastery of vocabulary.

Based on input and comments from Product and Design experts, the researcher made revisions to the media, which initially changed the question that appeared on the Instagram filter only once to several times. The researcher made revisions by adding new features. After students answered the first question,

students could click on the Instagram filter screen button which would provide another question so students could use it and would get different questions repeatedly. This will make it easier for students to understand a lot of vocabulary in one try of the Instagram filter.

## 3. The Students' Response Toward Instagram Filter

Based on the results of expert validation regarding Instagram Filters, the results show that the Instagram Filters developed was valid and can be used. The learning media developed was ready to be used and implemented by students. Based on the results of interviews and student response questionnaires with Instagram media filters that had been applied to students. That was supported by students' learning activities using this Instagram filter and their answers to interview questions and student response questionnaires. Instagram filters are a modern learning medium that they often use in their daily lives and help them remember new vocabulary. Students said that this was their new experience using Instagram filters. Instagram Filters can increase interest in learning because students are often bored with learning so it helps them understand the basics of Vocabulary. In addition, the Instagram filter was interesting because it took the theme "Programming" which was in line with their major. The Instagram filter was very interested in learning to use Instagram filters because they "look modern". students said that Instagram filters contributed a lot to increasing Vocabulary relevant to their major. Students also said that this Instagram Filter was very helpful in acquiring new Vocabulary such as the word "WireFrame". This is proven by the use of Instagram filters in two meetings.

However, some students had difficulty using Instagram Filter, but it was difficult to use when there was no signal. Some students had difficulty the first time they started because they were confused about clicking the start button, but after it was explained a second time, they understood how to use Instagram filters. The difficulty faced is lag in loading the Instagram Filter page. The questionnaire that will be distributed contains 16 questions which will be answered by 35 students. In 1 question there are 4 options, namely: Strongly agree score 4, agree score 3,

disagree score 2, strongly disagree score 1. The results of all scores for each question will be calculated using Excel. The results of the Student Questionnaire Analysis will be presented below;

Table 8: The analysis of the student questionnaire

No.	Indicator	Σ	Percentage	Criteria
		score	(%)	
1.	Learning using Instagram filters is more	140	100	Very Valid
	interesting than learning using conventional ones			
2.	Learning to use Instagram filters is fun	130	92,86	Very Valid
3.	Attractive Instagram filter design and appearance	124	88,57	Very Valid
4.	I feel that Instagram filters help me to understand	128	91,43	Very Valid
	new vocabulary			
5.	I feel that Instagram filters make me more	131	93,57	Very Valid
	motivated to learn new vocabulary			
6.	Using my Instagram filter it's easy to remember	126	90	Very Valid
	new Vocabulary			
7.	I feel that Instagram Filter makes me more active	125	89,3	Very Valid
	in learning			
8.	Instagram Filters aroused my curiosity about the	118	84,3	Valid
	topics presented			
9.	The material suits my learning needs.	122	87,1	Very Valid
10.	I feel that the material presented is related to	115	82,1	Valid
	everyday life			
11.	I feel the material presented is clear and	130	92,86	Very Valid
	structured			
12.	Instagram filters support my Vocabulary learning	127	90,7	Very Valid
13.	I can use Instagram filters independently	129	92,14	Very Valid
14.	The features in Instagram filters are easy to use	130	92,9	Very Valid
15.	The instructions and language in Instagram filters	128	91	Very Valid
	are easy to understand			
16.	I can easily access Instagram filters	131	93,6	Very Valid
	Average	2034	90,8	Very Valid

The results of the Student Response Questionnaire regarding the Instagram filter learning media were used to find out how students responded to the learning media being developed. Student responses can be in the form of opinions, suggestions, or criticism which can be used to improve the quality of learning media. The results of the Student Questionnaire responses to the Instagram filter were 90.8%, which means it is included in the criteria for very valid and usable media. The researcher can conclude that the learning media is effective, and interesting, and can facilitate students' Vocabulary learning. However, learning

media developers still need to carry out regular evaluations to ensure that the learning media remains effective and interesting for students.

## 4. Instagram Filter Experiment

The data normality test is carried out to check whether the data you are analyzing is normally distributed or not. This is done as a prerequisite test before carrying out the Paired sample T-Test. The analysis uses Shapiro-Wilk and the data obtained is as follows;

**Table 9: Normality test** 

#### **Tests of Normality**

	Kolmo	gorov-Smiri	nov <sup>a</sup>	S	hapiro-Wilk	
	Statistic	df	Sig.	Statistic	df	Sig.
PRE TEST	.165	35	.017	.940	35	.056
POST TEST	.170	35	.012	.940	35	.055

a. Lilliefors Significance Correction

Based on the normality test results seen from the table above, information is obtained that the Pre-test value obtained is Sig .056, which means > 0.05 and is declared normally distributed. Meanwhile, the post-test value obtained Sig .055, which means > 0.05. Based on these results, the Pre-test and Post-test data were declared normally distributed.

**Table 10: Paired Samples T-test** 

T-Test

#### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE TEST	56.29	35	13.522	2.286
	POSTTEST	76.57	35	13.708	2.317

#### **Paired Samples Correlations**

		N	Correlation	Sig.
Pair 1	PRE TEST & POST TEST	35	.818	.000

				F	Paired Sample	es Test				
					Paired Different	ces				
•			Mean	Std. Deviation	Std. Error Mean	95% Confidence Differe Lower		t	df	Sig. (2-tailed)
l	Pair 1	PRE TEST - POST TEST	-20.286	8.220	1.389	-23.109	-17.462	-14.601	34	.000

After the data was normally distributed, the researcher conducted a Paired sample T-test with the data obtained, there was an increase as evidenced by the Mean Pre-test 56.29 to Post-test 76.57, which means there was an increase in results. This is also supported by a Sig (2-tailed) value of 0.000, where 0.000 < 0.05 which means  $H_0$  is rejected and  $H_0$  is accepted. This proves that using Instagram filters makes a significant difference in increasing students' vocabulary mastery.

#### **B.** Discussion

The research data that will be produced includes two things, namely validity and practical results. Validity results include content and construct validity obtained through two experts. Meanwhile, the practicality of the learning media developed is based on the results of field trials, student responses, and Instagram filter experiments.

Referring to the research that had been carried out, learning media was produced in the form of Instagram filters which proved to be valid. Valid means that the media used successfully meets the predetermined standard criteria (Lestari et al., 2023; MZ et al., 2021; Putri et al., 2023). The validity of the test aims to determine whether the media that has been created can measure exactly what it wants to measure (Kadek Suartama et al., 2020; Putri et al., 2023; Wardani and Setyadi, 2020; Wayan Mertha and Mahfud, 2022). Test the validity of the material content and product media using expert validation. The validation stage by two experts aims to prove the validity of the content and media regarding Vocabulary learning. This was done so that the learning media developed could be used and achieve the indicators that had been set and validation results include examination, assessment, and advice from experts (Hasyyati and Zulherman, 2021; Ismawati and Mustika, 2021; Norita and Hadiyanto, 2021; Ruf, 2021). During the Validation process with experts, the researcher received a lot of suggestions and input regarding the learning media, namely Instagram Filter, which has been developed so that this Instagram filter is good and valid. Content validity is carried out by experts in the process of testing feasibility through analysis tested at this stage

consisting of scientific content aspects, construct aspects, and language aspects (Ismawati and Mustika, 2021; Khoiriyah et al., 2015; Taherdoost, 2016). Learning media can be said to be valid if the media meets several criteria such as being relevant to learning objectives, presenting material accurately, being easy to use and understand, and being effective and efficient (Akhmad Fadjeri and Anisa Dwi Nurchayati, 2022; Lestari et al., 2023; D. P. Putra, 2021; Sevtia et al., 2022). If the learning media meets these criteria, then the media can be said to be valid. This media can be used for learning with a high level of reliability. Based on the validation results, it can be concluded that the Instagram filter learning media had high validity. This means that this media can be used to facilitate vocabulary learning effectively.

Not only did this research produce valid media, but it also proved that the media developed could facilitate students' vocabulary learning. Validity based on student responses is validity which refers to the extent to which a learning media or research instrument can be accepted and liked by students (Ismawati and Mustika, 2021; Rizky Setiawan and Wiedarti, 2020). Validity based on student responses is an important aspect of the development of learning media (Agustina and Qomariyah, 2022; Akhmad Fadjeri and Anisa Dwi Nurchayati, 2022; Putri et al., 2023; Rahmah et al., 2020). This validity is important to ensure that the learning media is acceptable and liked by students. If the learning media is not valid based on student responses, then it is likely that the media will not be effective in learning (Chotimah and Hikmah, 2022; Ningsih et al., 2023; Rahmah et al., 2020; Rosyid Mahmudi and Alena, 2023). Therefore, the media developed must be ensured that it meets students' needs before it is applied to students. Interviews are a more indepth way to measure validity based on student responses. Interviews can be conducted individually or in groups and include more open-ended and in-depth questions (Hickman et al., 2022; Ranuharja et al., 2021; Silalahi et al., 2022). Based on the research results, this is shown through student responses during interviews and the Student Response Questionnaire. Students feel more motivated, understand, and remember vocabulary easily by using this media. Good learning media has several advantages, such as being able to attract students' attention, making the

material interesting and interactive, and providing direct practice and feedback (Fitriani et al., 2023; Hamzah, 2023; Pradini and Adnyayanti, 2022; Rahayu and Bhaskoro, 2022; Widjanarko et al., 2022; Xodabande and Hashemi, 2023). Therefore, it can be concluded that the Instagram filter learning media has the potential to be an effective learning media for vocabulary learning. These advantages make the Instagram filter learning media an attractive alternative for facilitating vocabulary learning.

Based on the research that has been conducted, it can be found that there was a positive influence of using Instagram filters in increasing the Vocabulary of software engineering students. Teachers feel helped by the existence of learning media in the form of game-based guest words because, with the Instagram Filter media, students are unknowingly invited to learn while playing. Judging from the students' perspective, there has been an increase and understanding of Vocabulary, where students can answer almost all the questions on the Instagram filter. Based on the results of the pre-test and post-test, there was an increase in students' average scores. Therefore, the researcher concluded from all the results obtained that Instagram filters can facilitate students' Vocabulary Learning.

The learning media that had been developed was learning media combined using technology by utilizing the Instagram application with an animated 3D filter feature. This Instagram filter was created using an Augmented Reality (AR) technology system that combines two-dimensional or three-dimensional virtual objects into a real environment so that users can interact with these objects in real time. Pramono and Setiawan (2019); and Putra, (2020) said that AR can be used to create educational games that can help students learn vocabulary. These educational games can be designed to improve comprehension, retention, and use of vocabulary. On the other hand, Kaviani (2022) and Pujiati et al., (2019) said that the Instagram application can be used as a learning medium to facilitate students' vocabulary because the Instagram application is an application that is very familiar to students because they often use Instagram application for social media. Instagram filters have great potential for use in vocabulary learning (Mustakin, 2019; Sanusi

et al., 2021; Tavassoli and Beyranvand, 2023). This filter can make vocabulary learning more interactive, interesting, and meaningful. Instagram filters can improve understanding of vocabulary by providing richer context about the vocabulary (Rasyiid et al., 2021). For example, students can use Instagram filters to create photos or videos that illustrate the meaning of the vocabulary being studied (Gonulal, 2019; Teng et al., 2022; ZAREI and RUDRAVARAPU, 2019). In general, the use of Instagram filters in vocabulary learning has great potential to increase learning motivation, vocabulary understanding, and vocabulary retention.

This research adopts previous learning media. However, the researcher changed it completely and created a new learning media, namely Instagram filters. The researcher completely replaced the entire design, Instagram Filter concept, and learning materials. The design of the Instagram filter that has been developed by the researcher completely uses a design that has been adjusted so that students can more easily understand the instructions when using the Instagram filter. Apart from that, the concept of Instagram filters was also adapted to content needs that are different from previous media. This concept the researcher designed a unique and interesting concept to stand out from previous media. Different concepts can attract students looking for new and different experiences. Instagram filters were targeted to different students based on current interests and trends. On the other hand, the material presented on the Instagram filter was also very different material because the Instagram filter was aimed at software engineering students so the material contained in the Instagram filter is very specific according to student needs. Specific learning materials help students understand concepts more clearly and easily. This helps improve student learning outcomes. Specific material also provides a clear understanding of what you want to convey. This helps avoid confusion and misinterpretation.

#### V. CONCLUSION AND SUGGESTIONS

This chapter will contain components that summarize the main research findings and provide recommendations for future research.

#### A. Conclusion

Development of learning media using the Instagram application by utilizing one of the features, namely Instagram Filter. The development of this learning media is the development of an alternative Vocabulary learning media. The researcher created an Instagram filter using a 3D animated Augmented Reality system which was assisted by a programmer to perfect the Instagram filter. The Instagram filter itself has an animation that will appear when the user activates Filter mode. An animation will appear above the student's head containing questions and random words related to the software's Vocabulary learning material. Each question can be changed randomly using a system so that students will get lots of random questions. After students use and try to answer the questions within the specified time, the correct answer will appear. Students can use this filter repeatedly and it can be used anywhere. The features contained in this Instagram filter are random questions, 3D animations, sounds, videos, and photos. Based on the results received and analyzed in detail, the Instagram Filter has been validated based on the aspects of Education Content Expert, Product and Design Expert, and Instagram Filter Experiment. Based on these results, the researcher concluded that the total score based on criteria that met the Instagram Filter was declared valid and could be used to facilitate vocabulary learning.

## **B.** Suggestions

The researcher provided suggestions for English teachers and further researchers. This suggestion relates to the development and importation of better use of alternative learning media in the classroom.

## 1. Suggestions for English Teacher

Choose an Instagram filter that suits your learning needs There are lots of Instagram filters available. Teachers need to choose an Instagram filter that suit learning needs, both in terms of material, level of difficulty, and learning objectives. Prepare a clear learning plan. Teachers need to prepare a clear learning plan before using Instagram filters in learning. This learning plan must include learning

objectives, learning materials, learning methods, and an assessment of learning outcomes. Train students to use Instagram filters. Before using Instagram filters in learning, teachers need to train students to use Instagram filters. This is so that students can use the Instagram filter smoothly and effectively. Teachers need to provide constructive feedback to students in learning to use the Instagram filter. This feedback can help students to improve their understanding and mastery of vocabulary. Researchers need to conduct more in-depth research to examine the effectiveness of Instagram filters in vocabulary learning. This research can be carried out using various research methods, such as experiments, surveys, or case studies. Researchers can collaborate with various parties, such as teachers, linguists, and application developers, to develop more effective Instagram filter learning media. If the learning goal is to improve vocabulary understanding, teachers can use Instagram filters that display images or videos that illustrate the meaning of the vocabulary. Students can use these Instagram filters to see how the vocabulary is used in real contexts.

## 2. Suggestions for Further Researchers

Researchers can research to examine the effectiveness of Instagram filters in improving students' vocabulary understanding. This research can be carried out using an experimental method, where students who use Instagram filters are compared with students who do not use Instagram filters. Researchers can develop Instagram filters that combine AR and VR. This Instagram filter can display 3D images or videos that can be manipulated by students. Students can use this Instagram filter to learn vocabulary more interactively and interestingly. The researcher can collaborate with teachers and language experts to develop Instagram filters that suit students' learning needs.

The researcher hope for future researchers will continue development using Quasi-experimental design. Quasi-experiments allow researchers to control several outside variables that could influence the results of the study. This is done by comparing the experimental group with a control group that has similar characteristics. Pre-experimental designs, on the other hand, have no control over external variables, so the research results are more susceptible to

bias. In addition, Quasi-experimental results can be more generalized to a wider population than pre-experimental design results because of better control over extraneous variables.

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## **APPENDICES**

Appendix 1
The interface of Instagram Filter



Picture 1. Outlook of Instagram Filter



Picture 2. Arrange words according to the correct vocabulary



Picture 3. The result of correct vocabulary

## Appendix 2

## The result of the Expert Validation Sheet

## **Validation Sheet for Education Expert**

"Creating an Instagram Filter to Enhance Vocabulary Acquisition in EFL

Students"

## A. Expert Validity

Name : Ria A. Asih, PhD

NIDPN/NIP : 0718078604

Institution : UMM

## B. Purpose:

The purpose of this instrument is to measure the validity of Instagram Filter for learning Media

#### C. Instruction

- Please, write down the comments and the points for improvement of the aspects in the Instagram filter.
- The interpretations of the validation score are as follows :
- 1. Very Poor
- 2. Poor
- 3. Acceptable
- 4. Good
- 5. Excellent

No.	Aspects	Comments	Point for Improvement	Overall Score (1-5)
1.	Content/Topic of material	Good, but should come with a "warning/ introduction" on how many words that the users have to arrange, and belong to what group of vocabulary. That will make the audience more ready.	Start with an opening statement, like: Can you arrange these jumbled letters into 5 words related to sports? And then the game can start.	3
2.	Clarity and Accuracy	Very good	N/A	5
3.	Level of Difficulty	If point #1 is addressed, the researcher can grade the level of difficulty following the length of each word, group of vocab, etc.	It can be graded starting from short syllables to longer syllables.	3
4.	Sense of Fun Learning	Impressive!	N/A	5
5.	Concept	Fresh and out of the box.	N/A, I wish you the best of luck!	5
6.	Hands-on/ User Friendly	Very good.	N/A	5

Source: The validation sheet obtained suggestions from professional experts in the field of Education.

Malang, 29 November 2023

## **Validation Sheet for Product and Design (Media)**

"Creating an Instagram Filter to Enhance Vocabulary Acquisition in EFL

## Students"

## D. Expert Validity

Name : Elfrida Rahmasari, M.Pd.

NIDPN/NIP :-

Institution : Graphic Designer at Junior High School 3 Pare

## E. Purpose:

The purpose of this instrument is to measure the validity of Instagram Filter for learning Media

#### F. Instruction

- Please, write down the comments and the points for improvement of the aspects in the Instagram filter.
  - The interpretations of the validation score are as follows:
  - 1. Very Poor
  - 2. Poor
  - 3. Acceptable
  - 4. Good
  - 5. Excellent

No.	Aspects	Comments	Point for Improvement	Overall Score (1-5)
1.	Design of Media	Secara	Perlu	4
	_	keseluruhan	dilakukan	
		desain media ini	pengembangan	
		cukup baik,	lagi agar	
		menarik	dalam satu	
		perhatian	video bisa	
		pengguna, indah	menjawab	
		untuk dipandang	lebih dari satu	
		hanya saja	vocabulary	
		desain untuk	sehingga	
		media terbatas	pemanfaatan	
		dan kurang	media lebih	
		efektif karena	efektif.	
		pengguna hanya		
		dapat menjawab		
		satu vocabulary		
		dalam satu		
		video.		
2.	Quality of pictures,	Secara	-	5
	animations, illustrations,	keseluruhan		
	sound, etc.	kualitas dari		
		gambar,		
		animasi,		
		ilustrasi, dan		
		suara jelas.		
		Penggunaan		
		animasi tidak		
		menimbulkan		
		miskonsepsi		
		pada konsep		
		vocabulary yang		
		disajikan.		
		Pengadaan		
		countdown		
		timer sangat		
		berguna sebagai		
		pengingat waktu		
		bagi pengguna.		
3.	Color/Background	Warna yang	-	5
	-	digunakan		
		kontras sehingga		
		membuat		
		tampilan		
		menarik		
		perhatian		
		pengguna.		

		Penggunaan		
		warna sangat		
		menyatu, warna		
		jingga dan layer		
		effect tidak		
		terlihat		
		bertabrakan.		
		Teks warna		
		navy kontras		
		mempermudah		
		pengguna dalam		
		membaca		
		sehingga		
		informasi yang		
		ingin		
		disampaikan		
		dapat diterima		
		dengan baik.		
4.	Attractiveness	Kolaborasi	-	5
		media berbasis		
		teknologi		
		dengan		
		pembelajaran		
		akan menarik		
		perhatian dan		
		minat pengguna		
		saat belajar.		
		Pengguna akan		
		termotivasi dan		
		tidak bosan.		
5.	Concept	Media sudah	-	5
	1	disesuaikan		
		dengan		
		karakteristik dan		
		kebutuhan		
		pengguna.		
		Strategi		
		penyampaian		
		media		
		memudahkan		
		pemahaman dan		
		penguasaan		
		vocabulary		
		pengguna.		
6.	Hands-on/ User Friendly	Media	_	5
•	Times on Ober Thendry	maintainable.		3
		Media dapat		
		dioperasikan		
		aro por abilitari		

# sederhana, dan tanpa kesulitan.

Source: The validation sheet obtained suggestions from professional experts in the field of technology.

Kediri, 30 November 2023

Elfrida Rahmasan, M.Pd.

## Appendix 3

## Interview guide for students

NAME	:
CLASS	:

- 1. What aspects of this learning media interest or engage you?
- 2. How would you describe the complexity of the vocabulary used in this learning media?
- 3. What has been your experience in using this learning media? Is it easy or challenging to navigate?
- 4. Can you share any specific challenges or difficulties you've encountered while using this learning media to answer questions?
- 5. In what ways has this learning media contributed to your vocabulary acquisition or improvement?
- 6. How do you feel about using Instagram filters to learn vocabulary? What aspects do you enjoy the most?
- 7. What are your feelings about combining learning with play when using this learning media? How does it impact your overall experience?

## ANGKET RESPON SISWA TERHADAP MEDIA PEMBELAJARAN INSTAGRAM FILTER

Nama	:
No. absen	:
Kelas	:

Petunjuk:

• Pilihlah salah satu jawaban yang diangap paling sesuai dengan memberi tanda cek ( $\sqrt{}$ ) pada kolom jawaban yang telah disediakan.

Keterangan:

SS : Sangat Setuju

S : Setuju

TS: Tidak Setuju

STS : Sangat Tidak Setuju

- Jawaban terhadap angket tidak akan mempengaruhi nilai atau hal yang lain yang dapat merugikan anda.
- Mohon diberikan tanda tangan pada akhir angket

NO	Dawn 4	SKOR			
NO	Pernyataan	SS	S	TS	STS
Keme	enarikan media				
1	Pembelajaran menggunakan Instagram filter lebih				
	menarik daripada pembelajaran menggunakan				
	konvesional				
2	Pembelajaran menggunakan Instagram filter				
	menyenangkan				
3	Design dan Tampilan Instagram filter menarik				
Penca	apaian pembelajaran		•		
1	Saya merasa bahwa Instagram filter membantu				
	saya untuk memahami kosakata baru				
2	Saya merasa bahwa Instagram filter membuat saya				
	lebih termotivasi untuk belajar kosakata baru				
3	Menggunakan instagram filter saya mudah				
	mengingat Vocabulary baru				
4	Saya merasa Instagram Filter membuat saya lebih				
	aktif dalam pembelajaran.				
5	Instagram Filter menimbulkan rasa ingin tahu saya				
	tentang topik yang disajikan				
Relev	vansi				
1	Materi sesuai dengan kebutuhan belajar saya				
2	Saya merasa materi yang disajikan berhubungan				
	dengan kehidupan sehari hari				
3	Saya merasa materi yang disajikan Jelas dan				
	terstruktur				
4	Instagram filter mendukung pembelajaran				
	Vocabulary saya				
Kemı	udahan penggunaan				
1	Saya dapat menggunakan Instagram filter secara				
	mandiri				
2	Fitur-fitur dalam Instagram filter mudah				
	digunakan				
3	Instruksi dan bahasa dalam Instagram filter mudah				
	dipahami.				
4	Saya dapat dengan mudah mengakses Instagram				
	filter				
	,		•		

Appendix 4

Documentation of The Users of Instagram Filter













Appendix 5
Pre-test and Post-test questions

**Pre-Test & Post-Test: Vocabulary of Software Engineering** 

Instructions: Pilih jawaban yang paling tepat untuk setiap pertanyaan.

1. The initial activation of a software program is called a
a) Launch
b) Protocol
c) Framework
d) User flow
2. A specific set of rules for communication between devices is called a
a) Database
b) Protocol
c) Algorithm
d) Server
3. The basic building block of a website's structure is called
a) HTML
b) Sitemap
c) Framework
d) Wireframe
4. A collection of organized data is stored in a
a) Database
b) Flowchart
c) Python
d) Crash
5. A common programming language used in software development is

a) HTML
b) Server
c) Python
d) Sitemap
6. A pre-defined structure for building applications is called a
a) Framework
b) User flow
c) Algorithm
d) Recursion
7. The visual representation of a user's journey through an application is
called the
a) User flow
b) Crash
c) Wireframe
d) Flowchart
8. An unexpected program termination is called a
a) Launch
b) Address
c) Crash
d) Prompt
9. A low-fidelity sketch of an app's layout is called a